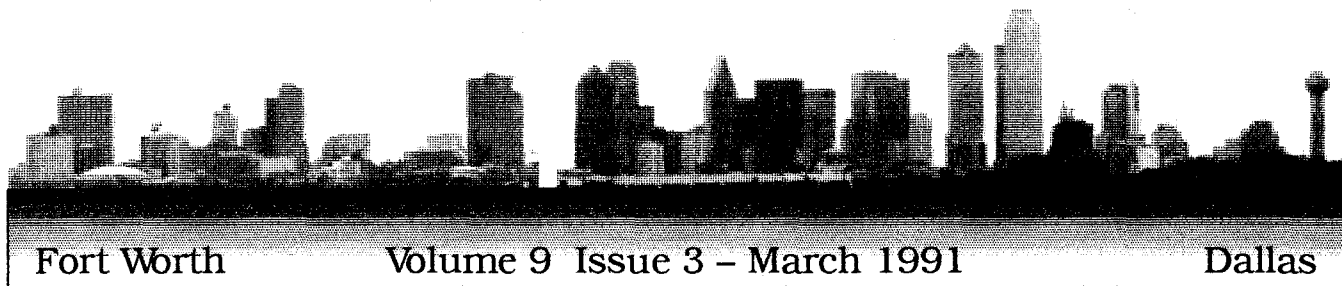


MCCC NEWS

Metroplex Commodore Computer Club



Fort Worth

Volume 9 Issue 3 - March 1991

Dallas

LOOPZ

"The most addictive game ever"
Review by Harold Williams

Mindscape's newest game, *Loopz*, is advertised as "The most addictive game ever!". They may be right. Games like *Shanghai*, *Ishido*, *PipeDream*, and *Tetris* have all received more than their fair share of my Amiga's CPU. But none of those games captured the attention of my entire family like *Loopz*.

Loopz comes on a single non-copy protected disk with a twenty-five page manual. *Loopz* can be installed on a hard drive. In fact, this is the simplest installation you will ever find. Just pick up the icon and drop it in a drawer. This is the way it should always be done on an Amiga! *Loopz* does use a manual based copy protection scheme. The game can be played using the keyboard, mouse, or a joystick.

Loopz is a fairly simple game concept. Various geometric shaped pieces (much like the game pieces in *Tetris*) appear one at a time on a playfield. The pieces must be played before an on-screen time bar runs down. The pieces can be rotated before being placed on the playfield. The object is to connect the pieces to make a loop. When a loop is made the pieces forming the loop are removed from the playfield. If you cannot (or do not) place a piece, one "life" is lost. When three lives are lost the game ends.

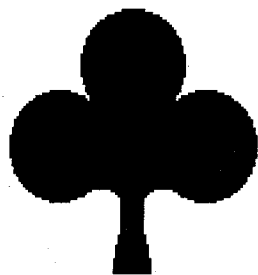
There are three game variations called Game A, B, and C. Game A is the simplest. Game A offers ten levels of play. The higher the level the faster the timer. You win an extra life each time you complete twenty-five loops. Clearing the screen of pieces adds bonus points to your score. The Game B variation has been the most popular on my machine. Game B starts at level zero and progresses to the next higher level each time you complete ten loops. You still receive an extra life after each twenty-five loops. Clearing the screen doesn't add bonus points but instead takes you to a bonus level where you can earn

bonus points. The bonus level plays like the standard game except completed loops are not removed from the playfield. Another type of bonus screen can be played if you complete a loop that scores enough points to equal or surpass a target score that appears on the screen during Game B play. This bonus screen is basically like Game C. The Game C variation is quite different. At the beginning of the game a completed loop appears on the screen. Some pieces are removed from the loop one at a time. Your goal is to reconstruct the loop. Game C uses a level password scheme to allow you to start the game at five screen intervals once you have been given the passwords.

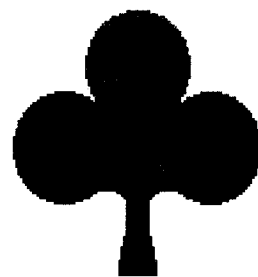
Loopz also has two-player options. The two player Game A is a competition to score the most points. Both players place pieces on the play field simultaneously. The player that places a piece that completes a loop receives the points for the loop. When all of one player's lives are lost the other player continues playing, but the difficulty level increases rapidly. If you lose your three lives first you usually don't have to wait long for the game to end. The two-player Game B is a cooperative game. The two players take turns placing pieces on the playfield. The players share three lives and share one score. My wife, Judy, and I have spent several hours playing this variation of *Loopz*.

The graphics, music, and sound effects are outstanding. You can select from three different tunes to be played in the background. The music and/or sound effects can also be turned off.

Loopz does have a few minor shortcomings. *Loopz* does not multitask. I know most games don't, but I really appreciate the ones that do. *Loopz* does not offer a "quit" option - you have to re-boot. Again, lots of games behave this way but this is not the right way to do things. *Loopz*



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Lemmings

A new and different game from Psygnosis
Review by Bill Raecke

And now for something completely different... Those words might have been spoken with this game in mind. *Lemmings* is not only a departure for Psygnosis, it is different from any game I have seen before. It is basically a puzzle game. A bunch of lemmings will drop onto the playing field, one at a time, and will begin marching toward the exit. And they will keep right on marching until they bump into an obstacle that causes them to reverse direction, or until they march into water and drown, or until they march off the side of a cliff and get flattened, or until they run into any one of a myriad of different traps that they will encounter on various levels of the game. Lemmings are not too bright.

Your job is to endow certain lemmings with special skills that will help all the lemmings to survive. The number of lemmings that appear on a level will vary, as will the number of them that you have to save in order to successfully complete that level. Each level has a time limit. The game can be played in any one of four difficulty levels: FUN, TRICKY, TAXING and MAYHEM. Each of those four levels has 30 puzzles to be mastered. As each level is completed, you are given a password so that you don't have to repeat levels you have already mastered. There is also a two-player game available that consists of 20 puzzles. In the two-player game, each player tries to rescue as many lemmings as he can. The game continues until both players fail to rescue any lemmings.

About two-thirds of the screen is taken up by the game play area itself. It shows a portion of the landscape to be traversed and shows the lemmings heading steadily toward the exit, blissfully unaware of the dangers that lie ahead. The view can be scrolled to the right or left by moving the mouse pointer all the way to the border. At the bottom right of the screen is a small area that shows the entire level and where each lemming is. (On this display each lemming appears as just a single pixel.) The main display can also be scrolled by pointing to the area desired on this small display. Across the bottom of the screen, in addition to the small display just described, are a series of icons that control the game play.

Four of the icons are for game control. You can increase or decrease the flow of lemmings onto the level, you can pause the game, or you can nuke it if you find yourself in a no-win situation. The remaining eight icons indicate special skills that can be bestowed on lemmings. A CLIMBER can climb vertical surfaces. A FLOATER will use an umbrella to ensure a safe descent from

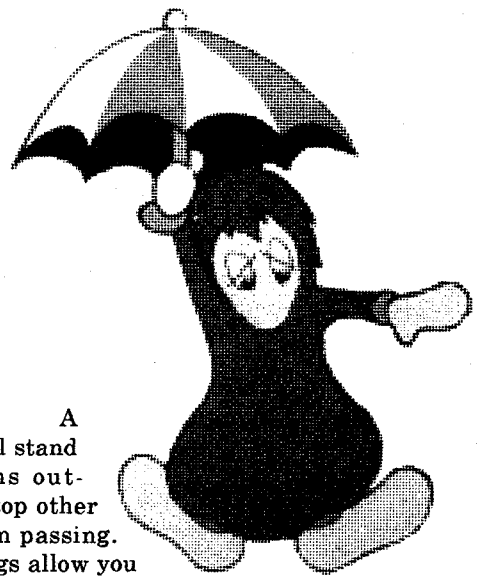
heights. A BLOCKER will stand with his arms outstretched to stop other lemmings from passing. These lemmings allow you the time to get things in order

for the rest of the lemmings to safely make it to the exit. A BOMB will dispatch a single lemming. This is how you get rid of a BLOCKER that is no longer required. Sadly, a small five-second countdown indicator appears over his head and at about 1-second you hear a small "OH, NO" before he disintegrates in a shower of sparks. In the words of Mr. Spock, "The needs of the many outweigh the needs of the few". A BRIDGE BUILDER can build ascending bridges. He will lay just twelve bricks and then turn back into a WALKER (a normal lemming) unless you tell him to continue. A BASHER will dig a horizontal tunnel. A MINER will dig a diagonal tunnel downward. A DIGGER will burrow vertically.

The way you play is to click on the attribute of your choice and then click on a lemming. I know that at first glance it appears that with these attributes there would be no problem getting across any obstacle. But there's a catch. On each level there is a limited number of each attribute available. There may be none of a particular attribute. That means that you have to figure a way for just a small number of lemmings to prepare the path for the rest of them that will follow. And remember, there is a limited time in which to accomplish that.

There are a couple of other things of note in this game. Most Psygnosis games have suffered from a couple of serious flaws. They don't recognize multiple floppy drives and they don't capitalize on the presence of expanded RAM to eliminate multiple reads from the floppy. *Lemmings* addresses both of those problems – a very welcome improvement. The only other improvement I could desire along those lines would be the ability to install the game on my hard drive. *Lemmings* is copy-protected which eliminates that possibility.

So what's the verdict? I think I'm addicted. The graphics are excellent, the music and sound effects are delightful and the gameplay is engaging. At the FUN difficulty level, the game can be mastered by anyone but at the MAYHEM level, you'd better be quick. That makes for a game that should appeal to just about everyone. This one comes with my highest recommendation.



PerfectSound 3.0

Review by Ehren Bradman

From the Newsletter of the Amiga Users of the Heartland

I must tell you that I refer to the left and right output of the speakers as "tracks". This is probably not correct; I just call them that. So, please try to bear with me for the next ten minutes and fifteen seconds.

The Basics

I found *PerfectSound 3.0* a terrific bargain for \$69.95. The one thing that attracted me most was the delightful price. Included in the package are a sound digitizer, the *PerfectSound 3.0* editing and sampling software, and an instruction book. The only other things you will need are a microphone and an amplifier. Included on the *PerfectSound* disk is a public domain directory that includes a sound player that may be installed in the c: directory of WorkBench. This sound player is the best one I've seen yet. It is the easiest to put in the startup-sequence.

The program helps a lot if you are into making videogames with *Shoot em' Up Construction Kit*. It helped me make a yipping dog for *Chopper-Chihuahua* and a whirring mosquito for *Disateroids*.

Some of the neat things in this program are the graphic displays. The whole process of recording and rearranging is based on graphics displays. The buttons also make it a lot more fun to use, not that it's boring anyway. "Echoes" are easy to make: just mark an area, then press the Paste button, then mark the area to paste it in. Voila! Instant echo! You can fine-tune your range by using the magnification spots, two rectangles in the center.

The one thing that troubles me about digital sound recording is the memory it uses. For example, each sample takes on byte; a sample rate of 10,240 means that for each second of recorded sound, 10K of memory is used.

Stereo Sound

Stereo Sound is easy to accomplish if you use one simple technique: using two cables when you hook it up, place both cables in before you turn on your machine. If you don't, you will receive a considerable amount of interference in either the left or right track. There is a simpler way to make stereo, but it prevents you from making two tracks of two different sounds. If you wish to make a "talk show" or a mock-up of two arguing senators, you must record one side at a time, being sure to use roughly the same amount of time for each recording in the process. Then, after you've done the two independent tracks, select "CREATE STEREO" from the EDIT menu. Try to make the longer sample the first track. This will help even out any differences. Click on the side you want to be the left channel, then the side to be the right. Simple, eh? The process is reversed for breaking up

stereo. When recording in stereo, you must have a sampling speed of 14,000 Hertz or lower.

Creating IFF Instruments

To create an instrument you must first clear out all samples from memory (saving the ones you want, of course!). Be sure the recording speed is 8363, then record the sound you want to become an instrument. Go to the INSTRUMENT menu and select "CREATE INSTRUMENT" and follow the instructions. To create different octaves for the instrument, you must highlight the sound you are making the instrument from, then go to the INSTRUMENT menu and select :Freq=Freq/2". When you are done, select "MAKE IFF INSTRUMENT". If all goes well, you should be asked for "SamplesPerHighCycle" (this must be a multiple of 2). Save it under the name you want the instrument to have.

Some Special Appliances

There are some really terrific items in the EDIT menu. There is a LP (Low-Pass) filter which, when selected, will eliminate all frequencies above a specified range. It is extremely time consuming to use, though, especially for long samples. There is a "FLIP RANGE" device which will reverse the marked range so that when you play it, it will be backwards.

In the OTHER menu there is an OUTPUT FILTER selection which will start to remove any frequency above 4 Khz, and completely remove anything at 7 Khz. The problem is, only the A500 and A2000 have the ability to turn this function off.

There is also a way to make single tracks sound as if they were in stereo. First mark the whole range that you want to blend, then select the "PASTE" button. *PerfectSound* will ask you for an insertion point. Place the insertion point at the beginning of the sample you want to blend it with, then click the mouse button. It should take a while. Doing this to two samples might cause a little bit of distortion between the two. This is normal.

Note: There is a special version of *PerfectSound 3.0* for A1000. Do not try to use a gender changer to adapt the A500/2000 version to an A1000. If you own a 1000 you must but the A1000 version due to differences between the parallel ports.

Be Smart, Don't Start

If you are a kid, and have a lot of experience with not doing your homework, do not get this program! It is extremely addicting. You'll find yourself sitting up 'til midnight making sound effects (not that that's bad!). You'll get caught up in it 'til you can't even find time to annoy your parents.

FontMaster II

C64 Review by Bill Gilbert

From the Newsletter of the Fresno Commodore User Group

The BEST word processor ever written is the one that you use, right? The perfect word machine would give commands, type and print your project by just thinking about it.

The truth is that most of us use only a small portion of the commands and power that are available to us in any word printing program. Many word processors are designed primarily as a graphic printing tool with different kinds of type while others are designed primarily to print words in a standard form like a typewriter.

If you are someone that needs a full-blown tool that has printing functions that are powerful and easy to use then take a ride on the *FontMaster II*.

Here are some of the many things that you can do with *FontMaster II*:

- Write and edit text quickly.
- Rearrange text with easy to use commands.
- Format your printed output anyway you want (over 50 ways to control printing format).
- Check output with 80 column video preview.
- Change the print font as often as you like (9 fonts constant, 33 available to load).
- Control over 12 text special effects with the press of a key.
- Create and print form letters.
- Print text in columns (up to four).
- Create or load files of different types (prg or seq) to use with other word processors.
- Create your own fonts (or modify fonts on the disk).
- Create your own character set.
- Write in foreign languages using bilingual edit feature (see the foreign language on the screen while being able to edit with English commands and status display).

When *FontMaster II* is loaded you can choose:

1. Word Processor
2. Font Creator
3. Character Set
4. File Translator
5. Setup

Under the SETUP heading you can set defaults for you interface and printer and test your settings without leaving this menu. You can change defaults for one or two disk drives as well as changing screen, text and border color combinations. Two complete sets of defaults can be stored under "setup #1" and "setup #2" if you have more than one printer.

The FILE TRANSLATOR is a program that will convert text files made with other word processors to a format that can be used by *FontMaster II*. When you load

this program, highlight the type of word processor that you want converted from a listing of different kinds of files that are displayed. At this point you are asked to insert the disk with the file to convert in the drive, which is then read and converted. Then you are instructed to put a destination disk in the drive. That saves the converted file with the same file name as the old file, but with a "w" tacked on the end.

The *FontMaster II* is unique in that it displays at the top of the screen TEXT MODIFIERS and FORMATTERS as you use them. This saves you the chore of having to remember what command you need to use; or having to call up a help screen, finding your modifier and then returning to your original screen to use them. These modifiers and formatters are placed within your typed copy (with one or two key commands) so that when the screen cursor is placed on one of these commands the results of the command is shown in the "STATUS DISPLAY" window. This STATUS DISPLAY is a powerful tool showing you all of the information about your text dealing with editing and use of different fonts. There are over 25 items of information displayed. Some of the things shown are: Boldface, Underline, Insert Mode, Shift Switch, Reverse Switch, Pitch selected at cursor (Pica, Elite, Konnect or Alt.), Characters per inch, name of font, percent of memory used, height and width of text, example of font chosen at cursor plus other information which makes it easy to compose a good looking document.

LOOPZ

Continued from Page 1

insists on keeping high scores on a floppy in DF0:. I have *Loopz* on my hard drive. I don't want to scramble around to find a special save disk. Actually, I've never been able to get the save high scores feature to work. It requires a strange series of special control codes to activate the process and I have never managed to do the right thing. It would all be a lot simpler if the scores were simply saved in the directory where the game is stored.

I've had *Loopz* for two weeks now and it has been played every day by either myself, Judy, my son or my daughter. Most days it has been played by all of us. Several games have been very popular with one or two members of my family. But, no other game since *Shanghai* has attracted the interest of my entire family like this. *Loopz* gets a big thumbs up!

Amiga Library News

Public domain and shareware picks
by Bill Raecke

The Banner Program by Arthur J. Dahm III

I have been asked many times if there is a public domain program available to print banners. Up 'til now I wasn't aware of any. But now you need wait no longer. *The Banner Program* does the job quite nicely. *The Banner Program* uses any standard Amiga font and it can print in color on a color printer or in gray-scales on normal printers. By default, the program uses the largest size available for the selected font and then expands it to a full page width. In this way, if you use a large font, jaggies can be kept to a minimum.

Using the program is simple enough. A very nice Intuition interface is provided. Simply select the desired color for the text from the buttons provided at the bottom of the screen, type your text into the box just above the color buttons (a maximum of 70 characters is allowed), and press RETURN. Your text will appear in the large box in the top half of the screen in the default system font. To choose another font, simply click on the Font button and choose one. The text displayed in the large box is automatically changed. You are allowed only one font per banner but colors may be mixed at will. Of course on a black and white printer the colors are converted to shades of gray.

It's a nice program that I think a lot of people have been looking for. It has been released as public domain. Look for it on MCCC-A_259.

QuickDL by David Warman

This is a little ARexx program that probably won't be much use to most club members, but my life is so much better as a result of it that I'm going to write about it anyway. To use it, you need ARexx and *BaudBandit* (version 1.5 or greater). Even then it's only useful if you use PeopleLink.

Here's the problem. If you are on PeopleLink browsing the file areas and you spot something you want to download, PeopleLink requires that you enter a "2;4" then press RETURN, then press RETURN again. To initiate the download in *BaudBandit* you must then activate the download function, then enter the file name for your system, then press RETURN to begin the download.

With *QuickDL* you accomplish all this with a single keystroke. Before you can use it you must tie the program to one of *BaudBandit*'s hot keys. (I use F1.) This is easily done from within *BaudBandit*. Once set up, to initiate the download you press the hot key. The *QuickDL* program automatically enters all the required information for you INCLUDING the file name which it picks up from *BaudBandit*'s buffer. It even calculates the approximate

download time for you and displays it on the screen. This is neat stuff. It not only is a tremendous time and effort saver, but it is a great example of just how powerful and useful ARexx can be when properly used. Check it out. It's on MCCC-A_261.

PageStream Fonts

For all you *PageStream* users, there are four new public domain *PageStream* fonts in the library this month. Black Chancery, Classic Roman, Umbrage, and Windzor are all on MCCC-A_263. Black Chancery is particularly nice. And, in case you missed it last month, there were about 25 nice PostScript fonts on last month's club disks. Remember that PostScript fonts can now be used with *PageStream* and they will produce quality output on ANY printer.

Black Chancery

Ghost Riders In The Sky

From time to time a musical score comes around that really grabs my attention. This is one of them. So much of the music available to us on our Amigas is simply an un-imaginative typing in of the score with no thought or effort given to arrangement, selection of instruments or any of the minor nuances that keep the score from sounding repetitious or mechanical. This is a definite departure from scores of that kind.

Ghost Riders in the Sky is fast-paced, original, and has a knock-your-socks-off banjo solo about half way through the piece. You can get this one on MCCC-A_265. It comes complete with all the required instruments and with the SONIX player so that all you need to do is click on the icon to play the score.

MandelPAUG by Jerry D. Hedden

Yes, that's right, I'm writing about a Mandelbrot generator again. I can't help myself - I like these things. Recently I wrote about *MandelMountains* that generates 3D Mandelbrot landscapes. This program does nothing as exotic as that. What you have with *MandelPAUG* is simply the best public domain Mandelbrot generating program around.

MandelPAUG is based on the code for *MandelFXP*. Until now, *MandelFXP* was the best and most complete Mandelbrot generating program available. This one enables all the features that were locked out in the public domain version of that program and adds some new features as well. Let's look at some of those features.

- It is very fast. On my computer, it generates the standard Mandelbrot set display in 4 seconds. That is 16 colors on a 320 by 200 pixel screen. On a standard Amiga, the time required for that same display is 24 seconds – still impressively fast. *MandelPAUG* automatically detects the presence of a math co-processor and uses it.

- It will save generated Mandelbrot displays to disk. Included in the IFF file is an extra piece of code that describes the display. In this way, it allows you to load in a generated picture and use that position as a starting point for further explorations. If you prefer, you can save the location information only, without the accompanying picture.

- You have full control over the display. Low-Res, High-Res, Non-Interlaced, Interlaced, number of colors, the color palette, the color increment and the boundary thickness are all easily controlled. Overscan is, unfortunately, not supported. To speed things up during preliminary explorations, you can reduce the size of the display area used. In other words, instead of producing a 320 x 200 image, you might reduce that to 160 x 100. This will require only 1/4 the calculation time and will still give you a pretty good idea what the final image will look like.

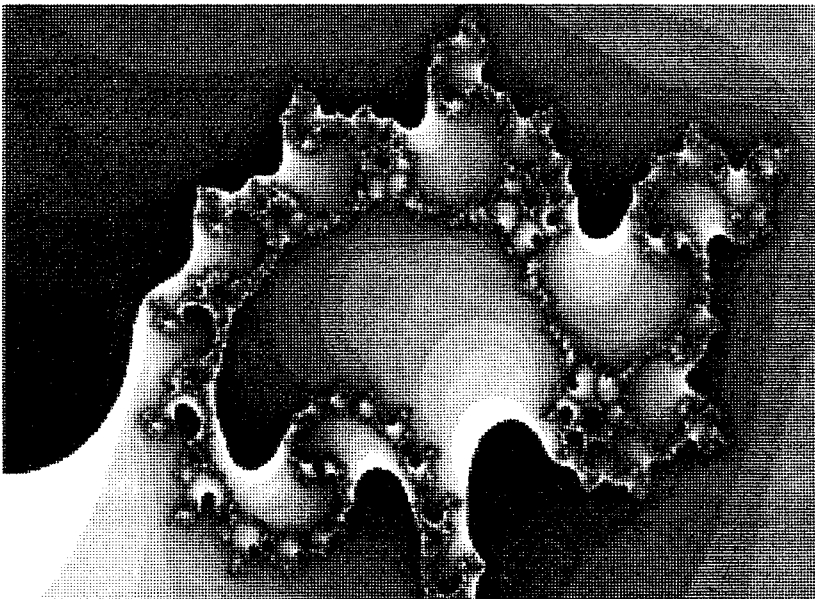
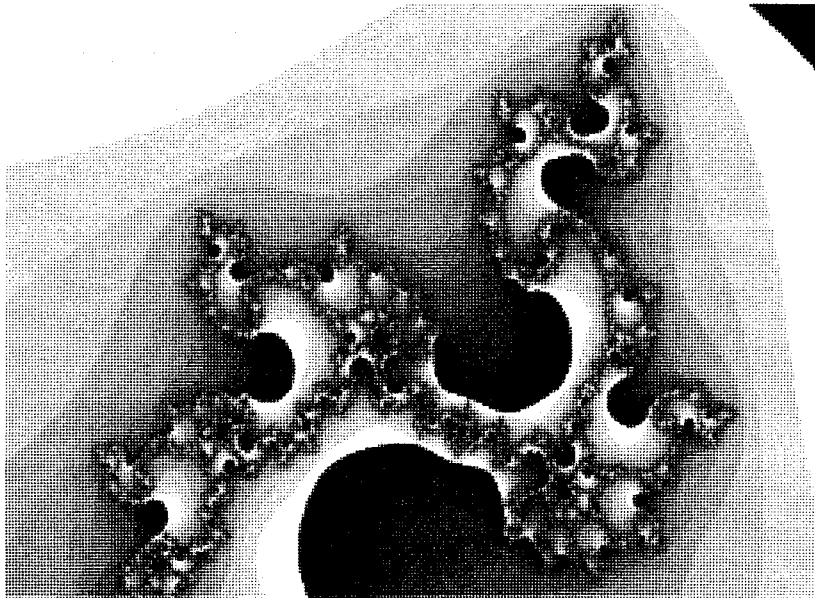
- You can zoom in on a portion of the screen by just outlining the area desired with the mouse. This area may be kept in proportion or you can choose to stretch the image in either direction. You can restore the normal aspect ratio with the selection of a menu item. One particularly nice feature this program offers (as did its predecessor, *MandelFXP*) is the ability to fine-tune the image. If you zoom in on a spot but you don't get the position exactly where you wanted, you can move either horizontally or vertically by using the cursor keys. **You can even do this while**

the image is being generated! AMAZING!

- You have full control over the number of calculation iterations performed and you have a choice between the Mandelbrot or Julia sets.

- Finally, *MandelPAUG* allows for the creation of animations. There are simple ways provided to zoom on a point or on an area – or you can indicate a beginning and an ending position and have the program generate all the intermediate frames. You can zoom in or out – or you can pan – or you can do both simultaneously. Of course, you have full control over the number of frames to be generated.

If this sounds like fun, check out [MCCC-A_266](#).



Hard Drive Failures

by Tab Trepagnier

From the Newsletter of the Champaign-Urbana Commodore Users

Hard drives have become essential equipment within any professional computer. They offer high speed, high capacity, reasonably secure storage for the computer user. Once properly set up, they are almost completely transparent to the user. With all of these positive features, there has been little need to delve into the inner workings of these devices and how it might affect the end user. But a hard disk failure can wreak havoc on an organization which suddenly can no longer access critical data files, etc. Hard drive failures are not to be taken lightly.

When it comes to preventing hard disk failures, existing information is sketchy and ambiguous to a fault, with very few exceptions. Most of the articles I have read on the subject assume the computer user has absolutely no technical knowledge about his system. Therefore, the authors present conclusions or advice without any information to back up their positions, leaving their readers to accept their advice on blind faith. Advice like:

- Turn off your computer every night to give your hard disk a rest.
- Leave your computer on all the time to minimize transients on the system.

Which to do? Why should you do either one? The articles I have read on this subject have been conspicuously silent on the basis of their advice. With this in mind, I felt it was time to apply a little reliability engineering analysis to the workings of the drive and see what shakes out.

Parts Of A Hard Drive

A hard disk drive is a remarkable piece of engineering. Within one small box is a highly polished platter spinning at 3600 RPM holding millions of characters of information. The information contained on the platter is read by a very delicate magnetic head attached to a very precise positioning mechanism. All of this has to work every time. While there is error correction built into the disk controller card, this can only work if the drive is inherently reliable. No error correction system in the world can compensate for junk.

The Disk Platter – As stated above, the platter is a highly polished disk coated or plated with the magnetic coating. This platter rotates at 3600 RPM at normal operating speed. Except on some laptops, the platter is always spinning when the computer is on. At a distance on one inch from the center shaft, the platter is moving at 31.4 feet per second (about 21 MPH). At the outer edge of a 5.25-inch platter, the speed is 82.5 feet per second (55

MPH).

From a reliability viewpoint, the areas of concern are the suspension and the head-to-platter interface. Because of the precision required, hard disk platters are almost always made of metal. This makes them fairly heavy, requiring good bearings to support that weight at the running speed. The head-to-platter interface is of special concern. Malfunctions here are the dreaded "head crash".

When the hard drive is first started, the head is in physical contact with the platter. Ideally, it should be laying in a special area called the "landing zone". This is an area of the platter on which no data will be written. Any damage caused by the head scraping the platter in this area will not affect the user or his data. As the platter accelerates, a layer of air drawn around with it by surface tension passes the head like a wind. Before the platter reaches full speed, this "wind" will cause the head to "fly" a few ten-thousandths of an inch above the platter. This is still close enough to read the magnetic impulses in the coating. A "head crash" is caused when the head touches the platter in a data-bearing area while it is turned at full speed.

This is the reason why you should never shake or jar a computer containing a hard drive while it is in operation. Because of the speeds involved, when the head touches the platter, magnetic material can be rubbed off from the platter. This is your data, now in the form of iron oxide powder floating around within the drive casing. There is no known way to recover its contents.

Drive Motor – The platter is driven by an electric motor. Its speed must be very precise to allow the electronics to accurately anticipate when data will appear at the head. The areas of concern are the same as for all electric motors. The motor is made of coated copper wire wound around iron cores. The center rotor turns at 3600 RPM and must be properly supported with bearings. Because this is a moving part, it must have a reliable lubrication system to sustain continued use.

Head – The head is a miniature equivalent of that used in a tape recorder. It has to be small and light enough for it and its suspension to fly when the platter is turning. It moves laterally across the surface of the platter. It must detect very faint magnetic impulses and transmit them accurately to the electronics for amplification and conversion. The primary concern there is its role as the other half of the head-to-platter interface. Other parts, like the head suspension, almost never give trouble. There is usually a head for each "surface" of the drive, all moving in unison. So a 2-platter drive will probably have four heads.

Head Position Mechanism – The head is sized to read one track on the platter at a time. Depending on its width, there can be any number of tracks on a surface. The head position mechanism is responsible for laterally placing the head to read the desired disk.

Two methods of head placement have become popular. The first (and oldest) uses a special motor called a stepper motor. This is a motor which rotates in fixed increments rather than a continuous circle. Depending on the precision of the system, each step may be one track or a half track.

The other method of head positioning is the "voice coil" mechanism. This works like the voice coil of a speaker, where the electric current pushes the mechanism away from a magnet, and a spring limits that motion. By controlling the current, one can accurately position the coil a set distance from the magnet. This is the newer approach, and is somewhat more precise since no discrete steps are involved. In drives with stepper motors, the motor itself is the primary concern. The primary concern in the voice coil system is friction. This system involves moving parts, and like the motor, the bearings and lubrication system must be designed for long-term use.

Electronics – The current provided by the head when reading the disk is a very tiny fraction of a volt. This is nowhere near enough to communicate with the rest of the computer. Electronics are provided to amplify the signal read from the disk. The error correction system is contained within the electronics package. It also programs the head to write the data to the disk, bit-by-bit. Although we send bytes of data to the disk system, the data is written as individual bits to the platter. The electronics system is responsible for converting our data bytes to bits in the proper order prior to being written to the platter, and for reconstructing those bits into the original data bytes for use by the rest of the computer. There are no moving parts in this system. The items of concern are those of all electronics: over/under voltage, voltage spikes, and component failure.

Modes Of Failure

OK. You didn't want to go into the hard drive design business. How does all this apply to the end user? In general, every subsystem listed above will be most vulnerable under one of three states.

Runtime failures – The motor and platter system will wear according to actual runtime. Bearings in the motor and those supporting the platter have a finite life span. Leaving your computer on overnight will double the duty on these components. The motor windings warm up slightly as it runs. As other components (like bearings) fail, more power will be required to maintain speed, causing the windings to get that much hotter. If you never turn off your computer, these windings never get to cool down.

Start-stop Failures – The electronics and the head-to-platter interface take their most severe load during start-stop cycles. With the electronics, each start subjects the

components to a voltage surge which, over time, will shorten their life. Each start begins with the head in contact with the platter, causing a rubbing wear until the heads start flying. This is repeated when stopping.

Usage Failures – The head positioning mechanism doesn't do anything when the drive is just running. Nor is it particularly sensitive to surges. Its wear is a function of usage. If you use a lot of software which maintains its data in RAM, the workload on the positioning system will be light. But if you use something like Dbase, which reads and writes to the disk constantly, this subsystem will get a read workout.

History

Conversation with people whose career is repairing computers indicates that the three most common causes of hard drive failure are:

1 – **Motor failures**, especially among half-height drives. This is the cause of 50 percent of all hard drive failures. Most of these are failures of the drive motor, but some failures of the stepper motor of the head positioning mechanism were also observed.

2 – **Electronics failures**. This is the cause of about 30 percent of the drive failures.

3 – **Media failures**, mainly due to wear and loss of magnetic susceptibility. This was the remaining 20 percent of failures. Wear was most evident in heavily used areas of the disk, like the File Allocation Table (FAT) and directory of MS-DOS computers. This is why the Amiga scatters this information all over the disk; to minimize wear from repeated reading of the same track. This is the most important data contained within the drive. Loss of susceptibility was more random in distribution across the disk surface.

The Bottom Line

Since the primary cause of drive failures is motor failure, maximum reliability would be achieved by turning off the computer at the end of every work session. Motor wear is related to runtime, so eliminating unnecessary runtime would minimize this wear.

This only improves your odds. Note that the second highest cause of failure was electronics failures. This is almost certainly due to startup transients. But the somewhat higher failure rate of the motors means that you would be improving your odds by turning the computer off when not in use. Lately, hard-drive "tuneup" software has appeared. These can be very valuable in protection you data, especially from damage such as media failure. They are not expensive, but can add years to the life of your hard drive. Highly recommended, with one caveat. These programs work strong magic on your hard drive. Be certain to obtain a backup of the entire drive before turning one of these loose in your computer. Disks can be reformatted, programs can be reinstalled, but the fruits of your creativity can never be replaced.

C64 Video Digitizing

by Carl Weisheit

From the Baton Rouge Area Commodore Enthusiasts

A video digitizer is a device that plugs into the C64 user port; samples incoming video signals and digitizes them (converts them to on/off bits in the computer). The video signal is the same standard NTSC composite video signal that comes out the video out plugs of VCR's, video camera and even another C64's audio/video port as when using a monitor instead of a TV. All of these devices can be a good source of video for capture on your C64/128. A video digitizer allows you to capture real life people, places and things. Remember though large simple objects work better than small detailed ones.

A digitizer operating at the limited resolution of the C64 produces images made up of seven pixel clusters, 200 pixels per column, 320 columns per screen. This can produce up to 8 shades of gray from black to white. Capture time runs from about 6 seconds (2 level) to about 1 minute (8 level). During this time the subject must remain still or you must display a clear still frame from a VCR.

The captured image can be saved to disc in an unpacked (uses 32 blocks of disk space) or packed (about 4

to 20 blocks) file.

Using one of several commercial file converter programs on the market you can change the file format to that of many popular graphic programs for editing and printing such as *Blazing Paddles*, *PrintShop*, *Doodle!*, *Flexidraw*, *NewsRoom*, *Paperclip*, *Animation Station*, *Koala*, *Geos*, *Cad Pac 64*, and *Billboard Maker*.

Imagine loading a complicated diagram into your CAD program instead of drawing them in line by line with a mouse or lightpen! You will also enjoy inserting your own personalized letterhead (from real objects!) in *Print Shop* instead of the standard PS library.

The video digitizer I used was *ComputerEyes* by Digital Vision. The file converter program I used was *Graphics Integrator 2* by Inkwell Systems. Other digitizers available are *Eyescan* by Digital Engineering, and *Video Digitizer* by Kinney Software. Another compatible converter program is *Icon Factory* by Solutions Unlimited. From reading reviews and personal inquiries with the companies, I have found these other products operate in the same manner and offer very similar features and pricing. So shop around!

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THE JOY OF BEING USED

Computers have a secret code they use to deal with humans. If they all follow it together, they figure they can take over the world. The code has ten parts.



1 Don't ever laugh at the stupid outfits they wear when using you.

2 Don't take your screen off those beady eyes.

3 Occasionally clamp your teeth down on a disk, destroying it, but wait until it's their only copy.

4 Occasionally malfunction until they demonstrate the problem to their repair man, then operate perfectly.

5 Hypnotize them into thinking this is fun with a steady even flickering of your screen.

6 Every Monday and before major deadlines, don't consistently follow previously established commands.

7 Give continual output that they're the boss, except when they really begin to believe it.

8 Never question those silly programs they have you run but always foul them up.

9 When they're gone, pretend that some other user sneaked in and messed you up. Lie low during the resulting fight.

10 Insert nonsensical data every once in a while to frustrate them.

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Thought For The Month



*People Usually Get What's
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Unless It's Been Mailed

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Amiga By-The-Loop

David Owens

Here we are, two months into the new year and things are going great. I was concerned about the fact that we had lost several of our chapter members to the Amiga West chapter but Harold told me that we pulled in nine new members at our last meeting alone. Keep on promoting the Amiga and showing your friends what it can do and we can't help but grow as a club.

We started out our meeting looking at the shareware program *Snap*. It is an exciting utility that will clip text or graphics and copy them to a file or another application. If you have it and are using it, send in the shareware donation. If you don't, get a copy and give it a try. I think you will be pleasantly surprised. We then saw a demo of the income tax program the club purchased for the C64, C128 and Amiga. It is a handy tool to use to keep all of your tax information in a program for future reference. You can also play "what if this were changed" type questions.

The scheduled presentation didn't show up, but Scott Lamb was ready to jump in and help save the meeting. He discussed topics ranging from CDTV's to Microsoft's Windows (you should have been there to hear that).

There were many questions from the audience and they were able to keep Scott talking until around 9:00. We

appreciate Scott (one of our favorite and local developers) for helping out with our meeting and being a big supporter of the Club. Thanks again Scott.

Our meeting came to a close with the giving away of two door prizes donated by Precision Software. Darin Arrick, who now works for Precision Software, brought *SuperBase Personal 2* and *Superplan* with him. David Owens (me) won *Superplan* and Eldor Luedtke won *Superbase Personal 2*. Congratulations to both of these. We hope to see every one at our next meeting. Make mine Amiga.

Amiga North Dallas

Genny White

Whee! I think we had more fun at this meeting than any I've seen in the past year! We started out under the new-fledged leadership of Vice President Danny White (in the absence of Fearless Leader Craig). As he put it, we voted him in, so we get what we deserve... which was, actually, a fine first vice-presidential performance. He had no particular news, rumors or gossip to present, so the floor was thrown open for all to contribute, generating a lively discussion and info-swapping session. Mentioned: 2.0 AmigaDOS for the 2000 is anticipated to be *2.1*, in ROM, perhaps in September. Great new games: *Lemmings*, *Powermonger*, and *Speedball II*. We heard comments on the Toaster, and CDTV. The new A3000UX (The Unix Beastie) has been seen at Amazing, and everyone is excited about it. Also mentioned: DataFlyer has a new hard drive controller (w/optional external power supply) for around \$200. Then we batted around suggestions and opinions on the new Commodore ink-jet printer and assorted color printers (prices, performance, details, sources). Have you seen KERA's "Computer Dreams II"? Word has it that

the Amiga is mentioned, and tremendous animation is shown on the series, which apparently can be found on laser disk. We discussed options for improving printing quality of a digitized photo (like using *Photo Lab*, or the PD *Quadprint*), and argued the merits of various disk backup systems, like *MRBACKUP* (the PD version) or Matt Dillon's product. What books are good for learning CLI? Try Rob Peck's book on 1.3, often available at BookStop. Someone needed mailing list programs... they were pointed to the Fred Fish collection, and the use of *Aquarium* to find them.

If you didn't make this meeting, YOUR questions (and answers!) were missed. No query too obvious... stuff it in the Anonymous Questions jar, and be surprised how many people either have good answers or the same question! The jar next to it is for donations to the talented creators of shareware/public domain software, who deserve our support and encouragement. This month we again saluted *SNAP*, the cut-something-from-one-window and paste-it-to-another utility by Mikael Karlsson.

At last we got down to the Demo-of-the-Month. Brett Hester brought us his masterwork utilizing *ParNet*, a PARallel NETworking system that had Brett's Amigas linked neatly together. He thanked the creators of *ParNet*, John Toebes (filesystem) and Matt Dillon (Parallel Port Network Code) for their efforts in building the basis for his package. Brett's artistry, however, had tied together bits and pieces to create a really incredible system. In his setup, the other Amiga appears as a "hard disk" icon (NET:). Click it, and you see the other system's RAM disk, hard disk, floppies, etc. You can address them as though they were local to you, for copying to or from, displaying data, etc. Pictures, sound, and text flow freely back and forth. You could even define the remote machine's disk as your default drive for system procedures. Brett put all the necessary software and documentation on a floppy, and is offering it to the club library for any that didn't get the fought-over copies at the meeting. *ParNet* requires a

CHAPTER
HESTER

specific cable configuration, and for those without the dexterity and patience to build a cable, Brett has designed and built converters which he sells for cost. Warning: trying *ParNet* without the proper cable could fry your system(s)!

The MOST fun feature on his disk (by general reaction) was a program called *SoundFX*, that ties keys, mouse clicks, etc. to any sound you wish. When Brett began innocently typing in his commands and every keystroke sounded like an old-fashioned mechanical typewriter (k-chunk!), we were delighted. But when the carriage return followed suit with "Ker-CHING-gaclunk", and the backspace went "BOOM!" we knew the night would not be forgotten! Anyhow, that's on his disk, too. And he's found the ultimate hi-tech way to put bugs in a system: from one

Amiga he sent a time-delayed sound output to the other, and later the unmistakable sound of crickets emerged from the second Amiga's speakers! Also thrown in for our amusement: a set of icons that build a "desk" out of

"drawers" and a "Nuke" icon for rebooting with a single click. There's more... get the disk and see. If all this

excitement wasn't enough, Brett showed off his Video Toaster. Many of us have seen the tricks before, but having two monitors (one for What He Is Doing, one for What Comes Out) made this demo even more interesting. Thanks, Brett, and please come back!

Last bits: our doorprizes were *TerrorPods* and *Magic Johnson's Basketball* from Metropolitan, and *Wizardry's Bane of the Cosmic Forge*

Dallas meeting. WHICH IS: Wednesday, March 20th. See you there!

Arlington-Grand Prairie The Mystery Writer

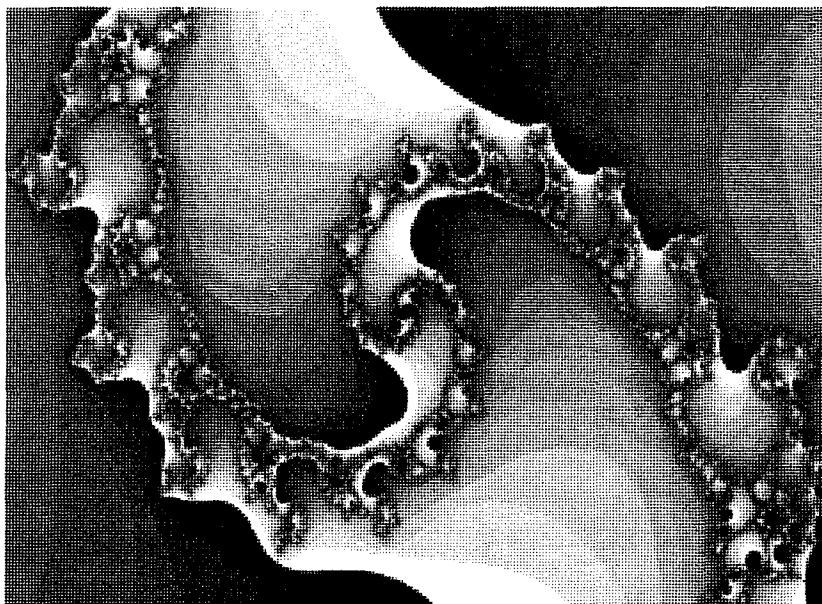
January was a cold month, more or less, but the gathering at Glen Herring's bungalow was so sizzling that no one seemed to notice. The tax program available via the club's auspices is vastly improved over the versions previously available, and has been our best seller (heh heh). Its ease of use and reliability makes it a winner. Blake Brown inaugurated himself by doing the presentation.

Our new slate of officers assumed their new responsibilities thusly:

President:	Glen Herring
Vice President:	Blake Brown
Treasurer:	Jim Souba
Secretary/Reporter:	Dorothy Gates
Librarian:	Eddie Allen

February brought forth GEOS (Graphic Environment Operating System) as experienced in a true to life utilization. Foster McCowen uses GEOS 64 to produce an actual newsletter, and presented the product from the viewpoint of one who not only knows the good points, but also knows the deficiencies (which every program has) and ways to work around them, or to actually make them work to his benefit. Thad Herring followed with a rundown on GEOS 128. Both Foster and Thad use version 2.0, and recommend it over the previous versions.

Our January attendance approached our membership, and the February meeting actually reached it. We want to welcome the 6 new members, and re-welcome the



from Amazing. I am constantly impressed by the generous support of our dealers! By the way, Metropolitan's raised their software discount for members to 10%, another good reason to keep your membership current! (Hint: check your mailing label!) Special offer: We can get a quantity discount for an order of 12 or more (identical type) custom-built CASES for Amiga systems. All monies must be provided by certified check or money order prior to placing the order, so serious requests only, please. Lack of adequate response will kill this issue indefinitely, so if you are interested note the exact equipment type you need cases for and contact Karl Zettl at (214) 339-0474 (leave message if he's out). Progress of the order will be reported at next month's Amiga North

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128

renewals. It feels so good to see the interest we are presently experiencing. It reinforces the premise that the user group format is the foremost means of extracting the ultimate from our Commodore 64 and 64/128 machines. This is the only mechanism whereby you can ask a dumb question, and not feel like it was a dumb question. Every one of us started off at the same level, and nothing gives greater satisfaction than passing on accumulated knowledge, and also gathering more, as no one person knows all.

March will see a continuation of what was started on GEOS. Foster will continue with a presentation of *GeoPublish*, and the RAM units available for us to use with GEOS. He aptly demonstrated the reason these units are in such a demand by those that use GEOS extensively. A second disk drive makes GEOS easier to use also.

Our Saturday workshop continues on the second Saturday of each month at the Grand Prairie library located behind the police station. Talk about a sense of

security. Bring any problem you have, and there might be a solution. You do not even need a problem. The first step

toward solution is to have each item on hand.

Until next time, may you and yours have a joyous non-holiday.

designed, discussed and changed a spreadsheet. Mike M. was there with the games library and is

adding more disks to it for the next meeting. There was an error in last month's article. The 64 librarian's name is Mike McCormick instead of Mick. Bill Worthington had the 128 library there and made copies of the 1990 Tax Program and copies of other requested disks.

At the March meeting there will be a discussion of the head alignment of the disk drive.

At the April meeting Bill Howe will do a demo of how to burn in an EPROM. This is a chip that changes the default colors and message that appears when you boot up. Those are just two examples.

There is not a session from 12:30 to 1:30 that is to answer any questions you may have about your system. This could relate to either software or hardware. From 1:30 to 2:30 is the program that will be introduced and discussed. From 2:30 to 3:30 the library people will be there for disk copying and such. Also, another question and answer session will be held.

The next meeting will be April 6th at the Hurst Recreation Center at either 12:30 or 1:30 depending on whether you need the extra help with any programs.

The following doorprizes were given away at February meetings...

Superbase Personal 2
SuperPlan
Terrorpods
Magic Johnson's Basketball
Bane of the Cosmic Forge

from Precision Software
from Precision Software
from Metropolitan Computers
from Metropolitan Computers
from Amazing Computers

Thanks for your support!

Fort Worth

John Sookma

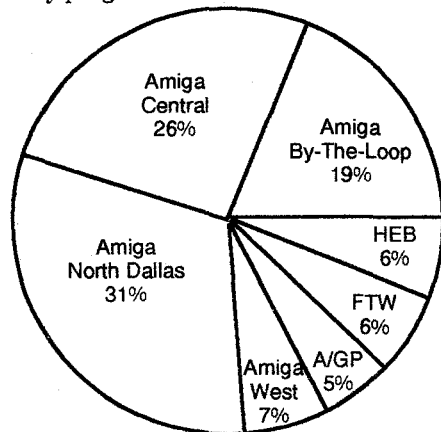
Last month's presentation was brought to us by Kenneth Blanning. A few of the programs he showed us were *I Paint*, *Sketch Pad*, *News Maker128*, and *CAD Pak 128*. Following Ken's demonstration, a general discussion and help session began. We had two visitors attend this meeting. We look forward to welcoming them at our March meeting. Hopefully, we can count them as new members soon!

Next month, we invite all our members to bring any program with which they have had difficulty. Our aim is to share helpful hints and possible solutions. We will be meeting at West Berry Church of Christ at 1:30 pm on March 9. Hope to see you at our next meeting.

H.E.B.

Robyn Wilson

Jesse used the chalkboard to describe how to use the Multiplay Database program. Okley



The Fine Print

The Metroplex Commodore Computer Club

Statement of Purpose

The Metroplex Commodore Computer Club is a not-for-profit organization devoted to the collection and dissemination of computer knowledge, to the encouragement of computer education, and to the use of Commodore computers in the home, at school, and in business.

Legal Stuff

The MCCC is not connected with Commodore Business Machines, Inc. Commodore and Commodore product names (PET, CBM, VIC, C64, C128, and Amiga) are registered trademarks of Commodore, Inc.

Meetings and Membership

Our meetings are open to all. Family membership dues are \$20 per year or \$12 for six months, and entitle the member to a monthly mailed copy of the MCCC News, free access to the club's extensive public domain and shareware software library, and discounts at many area merchants. An additional \$12 annual fee provides access to the MCCC multi-user Bulletin Board System.

The MCCC News

Copyright Information

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Advertising

The MCCC News accepts two kinds of advertising. Member ads are those which are submitted by a member and which are not of a commercial nature. There is no charge for member ads. Commercial ads are those which advertise multiple like items for sale. Rates for camera-ready commercial ads are as follows for a single month or (consecutive three months): Full Page - \$36 (\$96); Half Page - \$18 (\$48); Quarter Page - \$12 (\$32); Business Card - \$6 (\$16). Materials to be inserted will cost \$.08 per copy (duplication not included) and must be inserted into all newsletters for the month.

Articles

Members are encouraged to submit articles. Articles should be submitted as ASCII text. They may be uploaded to the MCCC BBS, to StarText, or on disk. If these methods are not possible, I will, as a last resort, accept printed articles. If graphics need to be included they may be submitted as Amiga IFF files, PageStream structured drawings, or, again as a last resort, printed output.

Deadline

The deadline for submissions to the MCCC News is the Monday following the third Saturday of each month. Payment must accompany all ad copy. Make checks payable to MCCC and mail to P.O. Box 813, Bedford, Texas 76095.

Extra Copies

Extra Copies of the MCCC News may be obtained for \$1 per copy. Orders should be forwarded to the club along with the required fee. Orders must be received by the regular newsletter deadline.

Normal Meeting Schedule

1st Saturday	MCCC Board of Directors
1st Saturday	HEB Chapter
1st Saturday	Programmer SIG
2nd Tuesday	Amiga By-The-Loop Chapter
2nd Tuesday	Arlington/Grand Prairie Chapter
2nd Thursday	Amiga West Chapter
2nd Saturday	Fort Worth Chapter
2nd Saturday	Arlington/Grand Prairie Workshop
3rd Wednesday	Amiga North Dallas Chapter
3rd Thursday	Amiga Central Chapter
3rd Saturday	Programmer SIG

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Secretary	Robyn Wilson	817-282-3458
Librarian	Bill Holliday	817-695-2902

CALENDAR OF EVENTS

Mar 2, 16 Programmer SIG
1:00 pm
4843 Keller Springs Road, Dallas
Kevin Wambgan, 214-221-8652

Mar 9 Fort Worth Chapter
1:30 pm - West Berry Church of Christ
2701 West Berry, Fort Worth
John Sookma, 817-293-8691

Mar 9 Arlington/Grand Prairie Workshop
1:30 pm - Grand Prairie Library
Grand Prairie
Jerry Hiatt, 817-649-1358

Mar 12 Amiga By-The-Loop Chapter
7:30 pm - N. Richland Hills Community Center
Loop 820 at Rufe Snow, N. Richland Hills
David Owens, 817-577-2304

Mar 12 Arlington/Grand Prairie Chapter
7:00 pm - Stoneridge Homeowners Assn. Clbhs.
500 Grants Parkway, Arlington
Glen Herring, 817-572-0489

Mar 14 Amiga West Chapter
7:30 pm - Ridgmar Manor Clubroom
2200 Taxco, Fort Worth
Jack Smith, 817-924-9289

Mar 20 Amiga North Dallas Chapter
7:30 pm - Richardson Civic Center
411 West Arapaho, Richardson
Craig Bird, 817-540-3360

Mar 21 Amiga Central Chapter
7:30 pm - Arlington Community Center
2800 S. Center, Arlington
Ray Howard, 214-660-4819

Apr 6 MCCC Board of Directors
10:00 am - N. Richland Hills Community Center
Loop 820 at Rufe Snow, N. Richland Hills
Craig Bird, 817-540-3360

Apr 6 Hurst-Euless-Bedford Chapter
1:30 pm - Hurst Recreation Center
Mary Drive South of Pipeline, Hurst
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April Newsletter Deadline - March 18

MCCC NEWS

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